

## **2. Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1. (Currently Amended) A method to determine the spatial distribution of magnetic particles in an examination area of an object of examination with the following steps:

- a) ~~Generation of~~generating a magnetic field with a spatial distribution of the magnetic field strength such that the examination area consists of a first sub-area with lower magnetic field strength and a second sub-area with a higher magnetic field strength,
- b) ~~Change of~~changing the particularly relative spatial position of the two sub-areas in the area of examination or change of the magnetic field strength in the first sub-area so that the magnetization of the particles changes locally,
- c) ~~Acquisition of~~acquiring signals that depend on the magnetization in the area of examination influenced by this change, and
- d) ~~Evaluation of~~evaluating signals to obtain information about the change in spatial distribution and/or the movement of the magnetic particles in the area of examination,

wherein the magnetic particles comprise a superparamagnetic material~~are introduced into and/or are present in the area of examination in a suspension, or an aerosol, or as in the form of a powder, especially diluted, with a casing, or, especially, or a thin coating, present in at least one capsule, or coupled to cells, particularly white or red blood corpuscles, immune cells, tumor cells or stem cells, or to ingredients, medication, antibodies, transplants or living organisms, or in the form of a, especially liquid, precursor form.~~

2. - 4. (Cancelled).

5. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein the area of examination ~~may comprise~~comprises boreholes or materials ~~made of~~comprising plastic or ceramic.

6. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein steps b) to d) are repeated at least once.

7. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein the object of examination comprises a polymer material, ~~especially or a~~ a thermoplastic polymer, or polymer blend, a polymer melt, a micro-organism, a plant, a plant component, an organism or a component of an organism.

8. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein at least a portion of the magnetic particles has anisotropic properties.

9. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein one or more of the magnetic ~~particle~~particles is a mono-domain particle ~~whose~~and magnetic reversal is implemented through Brownian rotation or Neel rotation.

10. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein one or more of the magnetic ~~particle~~particles is a hard magnetic multi-domain particle or soft magnetic multi-domain particle.

11. (Currently Amended) A method as claimed in claim 1, ~~characterized in that~~wherein the magnetic particles comprise a hard magnetic material~~materials~~.

12. (Currently Amended) A method as claimed in claim ~~[[1]]11~~, characterized in ~~that~~wherein the hard magnetic material comprises materials comprise one or more of Al-Ni, Al-Ni-Co<sub>2</sub> and Fe-Co-V alloys as well as and barium ferrite (BaO 6xFe<sub>2</sub>O<sub>3</sub>).

13. - 33. (Cancelled).